UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/875,480	06/06/2001	Nikil Jayant	062004-1770	7949

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THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP
100 GALLERIA PARKWAY, NW
STE 1750
ATLANTA, GA   30339-5948

EXAMINER
AN, SHAWN S

ART UNIT	PAPER NUMBER
2613	/5

DATE MAILED: 09/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

Office Action Summary

Application No.	Applicant(s)
09/875,480	Nikil Jayant et al.
Examiner	Art Unit
Shawn An	2613

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ___*three*___ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *May 19, 2003* _____ .

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *17-55* _____ is/are pending in the application.

    4a) Of the above, claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *17-55* _____ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some* c) ☐ None of:

        1. ☐ Certified copies of the priority documents have been received.

        2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

        3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    *See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

    a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____

4) ☐ Interview Summary (PTO-413) Paper No(s). _____

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____

DETAILED ACTION

Response to Restriction/Election

1.   Applicants elect <u>with traverse</u>, the distinct specie which reads on claims 17-35.

Furthermore, Applicants' remarks concerning the traversal regarding the claims 17-55

have been considered. Examiner agrees with the Applicants' traversal. Therefore, claims 17-55

will be examined together.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

3.   Claims 17-19, 22-23, 26-28, and 32-33 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Monro et al (6,078,619).

Regarding claims 17, 22-23, 26-27, 32, and 33, Monro et al discloses a system/method

and computer readable medium (abs.) for communication of video information, comprising:

a first object oriented coder (Fig. 1) for dividing data into object and background

macroblocks (34);   and

means for assigning/allocating (42) a higher number of bits to the object macroblock than

to the background macroblocks (col. 5, lines 30-37;   col. 6, lines 7-11).

Furthermore, Monro et al discloses providing some level of error protection. (Col. 6, lines

49-54), and error thresholds in rate buffering and the object separator module for limiting the

effects of camera noise (col. 7, lines 20-22).

Therefore, it would have been considered obvious to assign a higher number of error control overhead bits to the object macroblocks than to the background macroblocks, since the object macroblocks have been assigned higher number of bits, thereby having greater chance of sustaining more errors than the lower bits assigned background macroblocks.

Regarding claims 18, 28, Monro et al discloses a first processor (34) and a memory (42).

Regarding claim 19, it is considered an obvious design choice to simply add a second object coder that allocates a higher number of bits to the object macroblock than to the background macroblocks.

4.   Claims 20-21, 24-25, 29-31, and 34-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Monro et al as applied to claims 17, 22, 26, and 32 above, respectively, and further in view of Kato (6,415,055 B1).

Regarding claims 20, 24, 29, and 34, Monro et al fails to disclose a third object oriented coder that receives a location vector and at least one motion vector of an object macroblock in a previous frame, the location vector and the at least one motion vector of an object macroblock that is missing in a current frame, and replacing the object macroblock that is missing in the current frame with the object macroblock in the previous frame.

However, Kato teaches a location vector and at least one motion vector (Fig. 8, 6) of macroblock in a previous frame (7A), the location vector and the at least one motion vector (Fig. 8, 6) of an macroblock that is missing in a current frame (7B), and replacing the macroblock that is missing in the current frame with the macroblock in the previous frame (col. 4, lines 44-63).

Therefore, it would have been obvious to a person of ordinary skill in the art employing a system/method for communication of video data as taught by Monro et al to incorporate the well known concept of locating motion vector of macroblock in a previous frame and locating motion

vector of an macroblock that is missing in a current frame, and replacing the macroblock that is missing in the current frame with the macroblock in the previous frame as taught by Kato so that by adopting Kato's encoder (use it as a second/third object coder) for locating the motion vector of object macroblock in a previous frame, and locating the motion vector of an object macroblock that is missing in a current frame, and replacing the macroblock that is missing in the current frame with the macroblock in the previous frame in order to further improve the performance of the object oriented coder, thus enhancing more quality, and to allow more effective video messaging.

Regarding claims 21, 25, 30-31, and 35, Kato teaches a quantization factor (Fig. 8, 13) for receiving more location vectors and motion vectors.

5.   Claims 36-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Monro et al (6,078,619) in view of Kato (6,415,055 B1).

Regarding claims 36, 41, 45, and 52, Monro et al discloses a system/method and computer readable medium (abs.) for communication of video information, comprising:

a first object oriented coder (Fig. 1) for dividing data into object and background macroblocks (34).

Monro et al fails to disclose a third object oriented coder that receives a location vector and at least one motion vector of an object macroblock in a previous frame, the location vector and the at least one motion vector of an object macroblock that is missing in a current frame, and replacing the object macroblock that is missing in the current frame with the object macroblock in the previous frame.

However, Kato teaches a location vector and at least one motion vector (Fig. 8, 6) of macroblock in a previous frame (7A), the location vector and the at least one motion vector (Fig. 8, 6) of an macroblock that is missing in a current frame (7B), and replacing the macroblock that is missing in the current frame with the macroblock in the previous frame (col. 4, lines 44-63).

Therefore, it would have been obvious to a person of ordinary skill in the art employing a system/method for communication of video data as taught by Monro et al to incorporate the well known concept of locating motion vector of macroblock in a previous frame and locating motion vector of an macroblock that is missing in a current frame, and replacing the macroblock that is missing in the current frame with the macroblock in the previous frame as taught by Kato so that by adopting Kato's encoder (use it as a second/third object coder) for locating the motion vector of object macroblock in a previous frame, and locating the motion vector of an object macroblock that is missing in a current frame, and replacing the macroblock that is missing in the current frame with the macroblock in the previous frame in order to further improve the performance of the object oriented coder, thus enhancing more quality, and to allow more effective video messaging.

Regarding claims 37, 42, 46, and 53, Kato teaches a quantization factor (Fig. 8, 13) for receiving more location vectors and motion vectors.

Regarding claims 38, 47, Monro et al discloses a first processor (34) and a memory (42).

Regarding claims 39, 43, 48-49, and 55, Monro et al discloses an object oriented coder (Fig. 1) for assigning/allocating (42) a higher number of bits (transmission rate) to the object macroblock than to the background macroblocks.

Regarding claims 40, 44, 50-51, and 54, Monro et al discloses providing some level of error protection. (Col. 6, lines 49-54), and error thresholds in rate buffering and the object separator module for limiting the effects of camera noise (col. 7, lines 20-22).

Therefore, it would have been considered obvious to assign <u>a higher number of error control overhead bits to the object macroblocks than to the background macroblocks</u>, since the object macroblocks have been assigned higher number of bits, thereby having greater chance of sustaining more errors than the lower bits assigned background macroblocks.

Conclusion

6.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shawn An whose telephone number (703) 305-0099 and schedule are Tuesday-Friday.

SHAWN S. AN
PATENT EXAMINER

SSA

September 2, 2003